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<p>Responding to what was perceived as a negative image of police, law enforcement agencies in the early 1970's, began to change their traditional uniform to a "soft" - look civilian type blazer uniform. The movement to change the uniform was based on the assumption - which had not been empirically examined - that the traditional uniform with its official insignia and other accouterments overwhelmed citizens and engendered a wide range of negative reactions and that removal of these symbols (i.e., the uniform) would result</p>		

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in a more positive relationship between the public and the police. The purpose of the present investigation was to assess the reactions of individuals to varying modes of police dress using a methodology that considered both physiological and cognitive components of affective responsivity. A 2 (race of participant) X 3 (style of police dress) between-within design was used. The between factor was race of the participant (i.e., black or white), and the within factor was style of police dress (i.e., full uniform, full uniform minus weapon and accessories, and "plain" clothes consisting of blazer, slacks, coat, and tie). Eighteen black and eighteen white male undergraduate students viewed color slides that depicted the varying styles of police dress. During the first showing of the slides, heart rate and skin conductance were recorded. During a second showing, participants rated each stimulus slide using word descriptors in a semantic differential format. The results reflected that participants did not evaluate the various modes of police dress differently and that there were no racial differences in the evaluation of the various modes of police dress. Limitations of the study and recommendation for future research are given.

Affective Responsivity to Varying Modes of Police Dress

William L. Taylor, CPT

16 April 1980

Approved for public release; distribution unlimited

Western Kentucky University, Bowling Green, Kentucky. M.A.

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AFFECTIVE RESPONSIVITY TO VARYING
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AFFECTIVE RESPONSIVITY TO VARYING MODES OF POLICE DRESS

William L. Taylor

April 1980

53 pages

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During the social turmoil of the 1960's, the expression of anti-establishment attitudes and the consequent rebellion against authority brought law enforcement agencies across the United States into frequent and often violent confrontation with citizens. Responding to what was perceived as a negative image of police, law enforcement agencies began to change their traditional uniform to a "soft-look" civilian-type blazer uniform. The movement to change the uniform was based on the assumption--which had not been empirically examined--that the traditional uniform with its official insignia and other accouterments overwhelmed citizens and engendered a wide range of negative reactions and that removal of these symbols (i.e., the uniform) would result in a more positive relationship between the public and the police. The purpose of the present investigation was to assess the reactions of individuals to varying modes of police dress using a methodology that considered both physiological and cognitive components of affective

responsivity. A 2 (race of participant) X 3 (style of police dress) between-within design was used. The between factor was race of the participant (i.e., black or white), and the within factor was style of police dress (i.e., full uniform, full uniform minus weapon and accessories, and "plain" clothes consisting of blazer, slacks, coat, and tie). Eighteen black and 18 white male undergraduate students viewed color slides that depicted the varying styles of police dress. During the first showing of the slides, heart rate and skin conductance were recorded. During a second showing, participants rated each stimulus slide using word descriptors in a semantic differential format. The results reflected that participants did not evaluate the various modes of police dress differently and that there were no racial differences in the evaluation of the various modes of police dress. The implication is that the cost of adopting the blazer-style uniform is not justified on the basis of reducing negative affective reactions toward police and that improvement in the public image of the police cannot be achieved by merely changing the uniform. It is suggested that the major benefit of the uniform change may be that it facilitates an examination by the individual police officer of his or her role in the community. Limitations of the present study and recommendations for future research are also discussed.

CHAPTER I

REVIEW OF THE LITERATURE

Introduction

During the social turmoil of the 1960's, the expression of anti-establishment attitudes and the consequent rebellion against authority brought law enforcement agencies across the United States into frequent and often violent conflict with citizens. As a result, many police jurisdictions have searched for both a new public image and an acceptable self-image through the modification of police attire away from the semi-military uniform to civilian-type dress (Clement, 1969; Cizanckas, 1970; Geary, 1969; Kellog, 1971; Tenzel & Cizanckas, 1973; Tenzel, Storms & Sweetwood, 1976; Wiley & Cochran, 1972).

The police uniform "civilianization" movement has been based on the assumption that the traditional police uniform with its official insignia and other accouterments, including the conspicuous display of weapons, tends to overwhelm citizens with police authority and engenders a wide range of negative reactions including fear, hate, distrust, and contempt. According to view, the repugnance for the police role is directly related to the uniform as a symbol of aggressiveness, authoritarianism, and the arbitrary

imposition of unrestrained force. Such views associated with the police uniform are believed to escalate police-community polarization and to result in mutual antagonisms which cause self-reinforcing attitudes of mistrust and cynicism in both citizens and the police. Therefore, it has been hypothesized that the removal of these symbols (i.e., the uniform) that emphasize polarization will result in decreasing the anxiety that is associated with the relationship between the police and the community and, thereby, facilitate positive communication and understanding (Tenzel & Cizancas, 1973).

Central to the rationale for uniform changes for police officers is the idea that the way in which an individual reacts to another depends on the perceiver's perception of the role and personality of the other (Douty, 1963). Therefore, "person perception" is briefly examined below and, with that foundation, the general influence of dress on person perception is outlined and related to the purposes and functions that uniforms serve. A review of the relevant research on police uniform concludes the literature.

Person Perception

Person perception is related to the processes by which humans come to know and to think about other persons--their characteristics, qualities, and inner states (Tagiuri, 1969). People are able to perceive various psychological properties and potentialities of others through various cues. According to Tagiuri, these "observations or inferences we make are principally about intention, attitudes, emotions, ideas,

abilities, purposes, traits, thoughts, perceptions, and memories--events that are inside the person and are strictly psychological" (p. 396).

Person perception is an interpersonal phenomenon and is governed by the same kinds of rules and expectations that regulate other forms of social interaction (Goffman, 1959). As such, person perception is a behavioral pattern that enables us to meaningfully organize our social milieu. The impressions we form of others is an evaluative aspect of this phenomenon in which individuals make social judgements about perceived persons (Perry & Boyd, 1972). The behaviors the source or stimulus person chooses to emit can have implications for the perceiver and the impressions the perceiver forms can in the same way effect the stimulus person. The social nature of person perception thus places restrictions and expectations upon both participants.

Dress, Perception and Impression Formation

The variables which constitute an impression of appearance have their origins in both the perceiver and the individual being perceived. The perceiver brings to the situation certain past associations, past experiences, and perceptual skills which influence perception and impression formation (Jones, 1975). Impressions formed and judgements made of others are based on a variety of cues such as gestures, manner, posture, facial expression, physique, and dress (Hamid, 1969 & 1972). Dress, like other cues, is a cultural object and has utilitarian value. As such, it

communicates messages regarding the function it serves.

The dress of any individual is a type of "sign language" that communicates complex information and is usually the basis for impression formation (Horn, 1971). (The terms "articles of clothing or adornment" are considered to be the basic unit of dress. As articles of clothing and adornment are organized in relation to one another, the emergence of dress takes place.) Dress is an intimate and inescapable aspect of the person as a stimulus object and, therefore, has an influence on the impressions or images created in the mind of the perceiver (Douty, 1963).

As a communications medium, dress serves multiple functions (Kefauver & Touchie-Specht, 1971). Dress symbolizes and communicates information about emotions the person may be experiencing (e.g., the widow dressed in black). Dress also provides a reliable cue for role differentiation and often serves as the basis for personality typing. For example, labels applied to people like hippy, flapper, sailor, cop, and surfer not only generate specific images regarding dress but also are often associated with stereotyped assumptions regarding the personality, socioeconomic status, and behavior of the labeled individuals. In terms of initial credibility, perception of an individual's trustworthiness, reliability, or honesty may be significantly influenced by what an individual wears (O'Neal, 1977).

The ability to discern patterns of association between behavior and dress are formed during childhood and continue throughout adolescence and adulthood (Hillestad, 1975).

Shortly after birth, children begin to rapidly develop their ability to visually perceive their environment and are able to visually differentiate among people (Kaluger & Kaluger, 1974). During socialization, children learn to attach cue value to what an individual wears and can frequently distinguish between males and females before physiological differences are known (Livesly & Bromley, 1973). Children are also able to identify firemen, police officers, soldiers, medical practitioners, and others long before they can make inferences about possible differences in personality.

Membership groups, status, and role involve behavioral expectations which are represented to a large degree in symbolic form by the clothes one wears (Young, 1947). Although, as a rule, people are not consciously aware of the impact of dress, it does play a significant role in all facets of life. Ryan (1966) relates that if human beings were not reacting to others in social situations, then dress would simply not be necessary beyond the protection it offers from the environment.

Source and Receiver Variables

The extent to which impression formation is based on dress is a function of the distinctiveness of the clothes as well as the clarity of stereotypes connected with the particular styles of dress (Coursey, 1973). In order for communication to take place, both a person who is a source and a person who is a receiver must be involved. Furthermore, in most cases individuals function as both sources and receivers

during interaction. The meanings associated with dress are the result of source variables which affect cue transmission and receiver variables which determine how cues will be perceived and interpreted. Although the following discussion is oriented toward sources and receivers as single individuals, the terms may be used to refer to groups.

Source Variables

A number of source factors influence the fidelity of "dress" messages including communication skills, attitudes, values, level of knowledge, and socio-cultural position (Hillestad, 1974; Leathers, 1976). Although not as salient when dealing with perceptions of police since their mode of dress is for the most part prescribed, these factors are nevertheless important and require brief examination.

Because dress has utilitarian value, it communicates functional messages. In addition, dress has the potential of being manipulated to convey messages in specialized ways depending upon the communication skills of the individual. Even when dress is prescribed, as is the case with many occupational uniforms, seemingly minor variations in individual wearing style and the use of various accessories send powerful messages regarding the source (e.g., consider the message transmitted by the overweight sheriff who wears sunglasses with "mirror-finish" lenses which preclude eye contact and who carries his pistol low on his hip). Likewise, initiation of messages through dress reflect the

in messages involving dress. The meanings associated with dress may be so strong that they become a major and often overriding factor influencing the receiver's attitudes toward a source. For example, some may evaluate a soldier or police officer negatively based only on a stereotype associated with the uniform without any knowledge or consideration of the personal characteristics of the wearer. Indeed, Hamid (1968) reports that consistent stereotypes often originate from wearing apparel rather than other characteristics of individuals. Like the source, the receiver is also influenced by the values which stem from socio-cultural experiences. Interpretations of dress communications are likewise directly related to the receiver's level of knowledge concerning the functions of dress and its underlying meanings. For example, many of the messages associated with dress in one culture are unfamiliar to foreign visitors. Consequently visitors usually have considerable difficulty interacting with individuals in a foreign country (e.g., Western visitors in non-Western countries).

Addressing the receiver variable issue, Ryan (1966) suggested that the particular sort of characteristics perceived will depend upon the interests and values of the observer. From a slightly different perspective, Jones (1975) concluded that clothing varies in its communicativeness according to the perceiver's frame of reference. Similarly, Horn (1975) proposed that people perceive clothing in different ways and interpret its meaning according to the associations they

have learned to make with it over time. More succinctly, James (1975) observed that each facet of the receiver's social existence enters into the response to a message and contributes to meaning the receiver derives from dress. Thus, the receiver involved in personal perception brings to the situation certain predispositions which directly influence impression formation and these factors tend to function as filters which results in what McCall (1978) has termed "selective perception."

The Effects of Uniforms

Although there are a number of books on the history of costumes and military uniforms, there are only a few on the psychology of dress and none related to police dress (Lipsett, 1976). Recent books on dress have speculated briefly on the theoretical aspects of uniforms and their effects; however, these works do not address the uniform issue in any substantive detail (e.g., Leathers, 1976; Roach, 1965; Ryan, 1966). A review of the research literature regarding dress reveals that uniforms have served a number of important functions throughout much of recorded history: social control, differentiation of members from non-members, and guides for social interaction.¹

Social Control

Roach and Ficher (1965) point out the essential relationship between uniforms as symbols of authority and a government's ability to control the population:

Without the invention of clothing it would not be possible to develop the highly complex systems of governments with their armies, navies and police forces, which are now in existence all over the world. Yet this is obvious when we realize that all government is based on the domination of the population by an individual or small governing group which is, as we say "clothed with authority." This authority is generally indicated by clothing. (p. 124)

Differentiation

Uniforms also serve as a means to indicate the relationship of an individual to a group; the importance of the uniform as a differentiating device is indicated by the sometimes severe sanctions against imposters. A group certifies an individual as its representative and assumes responsibility for that person's activities by allowing the use of its uniform. The uniform is a symbolic statement that an individual will adhere to group norms which has the ultimate function of suppressing individual idiosyncrasies in behavior and appearance. By wearing the uniform of a particular group, an individual indicates that the right to act freely has been given up in deference to the rules and limitations of that group (Leathers, 1976). Furthermore, Shaw (1973) points out that the symbolic nature of the uniform results in individual deviations being more visible. For example, a sleeping uninformed policeman is incompatible with expectations of vigilance and alertness. Likewise, public drunkenness by a priest or rabbi dressed in religious garb would be highly visible and such behavior would violate the norms of the religious community and of society in general. In both cases, the evaluation of the appropriateness of the behavior would

be based solely on expectations associated with the particular uniform or occupational attire.

Social Interaction

The uniform serves to shape interaction which can be best illustrated through the examination of the social placement phenomenon, wherein an individual attempts to establish the identity of the other and attempts to determine the legitimacy of the other's identity claim. Essentially, the two concerns in social placement are: Whom does the other purport to be, and can the assertion about his or her identity be verified? In the case of the uniformed police officer, both questions are answered without difficulty.

Joseph and Alex (1972) illustrates the social placement phenomenon and the function of the uniform in their description of a door-to-door search for a missing child. The early morning search included both plainclothes detectives and uniformed police. The detectives had to be accompanied by uniformed patrol officers who had to verify the identity of the detectives so that they could gain entry into apartments in order to question residents.

Research on Uniforms and Perceptions of Police

In recent years there has been a number of research studies conducted to investigate the relationship between dress, compliance, and impression formation (e.g., Cooper, Darley & Henderson, 1974; Emswiller, Deaux & Willits, 1971; Kerr & Dell, 1976; Kness & Densmore, 1976; Mathes & Kempher, 1976; Rosencranz, 1962 & 1965; Suedfeld, Bochner & Matas,

1971; Woolridge, 1978). However, few studies have been conducted concerning the functions of uniforms and associated meanings.

Experimental Studies on the Effects of Uniforms

Coursey (1963) investigated the question of whether specifiable stereotypes were communicated by uniforms (i.e., the black suit and Roman collar of the Catholic priest). The author found that distinctive dress can convey a specific, reliable, and measurable stereotype. Coursey concluded that the stereotype communicated by a uniform most likely varies with the type of uniform as well as across different populations. He also suggests that in the mind of the beholder clothes do indeed make the person rather than the person making the clothes.

In a similar fashion, Rinn (1976), extending the work of Klein, Pillsbury, Bushey and Snell (1972), Marcuse (1967), and Petrovich, Bennet and Jackson (1968), investigated the stereotypic meaning associated with nurses dressed in white uniforms. Rinn found that the patients who became anxious and agitated in the presense of white uniforms had had past experiences with similarly dressed nurses who had administered injections, enemas, and other painful or embarrassing treatments. Based on the principles of general learning theory, Rinn demonstrated that patient behavior was affected by a nurse in uniform to the extent that such an individual had been previously associated with negative experiences.

Studies of Police Uniforms

Survey Studies. Olson (1972) investigated the social

meanings of police uniforms and found that peoples' beliefs about the purposes and functions of the police uniform generally fell into five themes. The themes reflected that the uniform is a symbol of the police officer's role; that the uniform serves organizational needs and purposes, i.e., fosters group identification, cohesion, and esprit de corps; that the uniform serves to deter crime; that the uniform is a symbol of authority; that the uniform has functional value (e.g., it is easy to identify); and that police wear uniforms simply because they always have worn them. Olson observed that there was nothing profoundly ideological about these themes and that evidence of hostile antagonistic themes was slight.

Ellis, Hurd, Lindell, Nehmzow, and Rief (1973) investigated the themes developed through Olson's (1972) work using a questionnaire that permitted seven distinct groups of citizens to rank order short statements regarding the reasons police officers wore uniforms. The six statements were identified as crime prevention, pride, obey authority, recognition, public security, and superiority. Items concerning authority and superiority were ranked lowest by respondents. The categories of crime prevention, recognition, and security were ranked as being the most important meanings associated with the uniform. These results were consistent across race, sex, and occupation. Ellis et al. suggest that the uniform, independent of the wearer, is a symbol of social force and functions as a method of social control. Furthermore, the meaning of the control function of the uniform is more

important to the public than the perception of the meaning of the uniform to the wearer, i.e., the uniform is perceived as something which is publicly beneficial rather than as an object which provides some kind of psychological advantage to the individual police officer. Although Ellis et al. did provide some interesting insight into the problem, the usefulness of the results are questionable since comparisons were based only on inspection of the average ranking of statements by respondents from each occupational group and no further statistical analyses were reported.

Experimental Studies. Muchmore (1975) investigated the effect of the police uniform on group functioning. Independent variables for his experiment consisted of five photographs which depicted four "neutral" persons and one "average" looking adult male dressed in a police uniform. Two hypothetical situations were then described to participants who were white middle- and upper-class college students. In the first situation; participants were requested to rank order the photographs to reflect individuals best suited for a discussion group whose purpose was to consider "the role of public participation in school affairs." In the second situation, the ranking task was for a group considering "the problem of juvenile delinquency." The results revealed that the policeman was seldom chosen as a group member in the first situation; the reverse was true in the second case where the question was related to an area generally considered with the jurisdiction of the police. Muchmore suggests that the "authority symbol" represented by the uniform may engender negative responses

only when its possessor enters situations in which the uniform is irrelevant and that the symbolism associated with the police uniform is not universally perceived as having negative connotations. Muchmore acknowledged that the results of his study may have been influenced by variables in the photographs other than the uniform. More importantly, he points out that the participants were a homogeneous group and that the participants' "experiences with law enforcement officers and ... [the] consequent attitudes toward those officers would likely be quite different than other groups" (p. 71).

In a related effort, Bickman (1974) investigated the social power of the uniform by means of two field experiments conducted in Brooklyn, New York. In the first experiment, people were randomly stopped in the street by a confederate who was dressed in one of three ways: a civilian, a milkman, or a guard. Respondents were asked to pick up a paper bag, give a dime to a stranger, or move away from a bus stop. Bickman found that individuals tended to comply more with the guard than with the civilian or the milkman and interpreted the data to indicate that compliance stems from the uniform as a symbol of power and authority.

In Bickman's second field experiment (Bickman, 1974), the basis of the guard's power was examined. Individuals were again randomly stopped on the street and were asked by a confederate dressed as a guard to give a dime to a stranger. The guard would then either remain in the immediate vicinity (surveillance condition) or would leave the area (nonsurveillance). Since compliance was not affected by the surveillance

manipulation, Bickman believed that the guard's power was based on legitimacy given the uniform rather than on coercive power as suggested by Second and Bickman (1964). Based on his two field experiments, his conclusion was that compliance stemmed from the person's perception and evaluation of the symbolic legitimacy of the uniform and compliance did not depend on surveillance.

However, generalization of the findings of Bickman's two experiments should be done with caution. First, a guard's uniform, particularly without a weapon, is not completely equivalent to a policeman's uniform. Second, Bickman's experimental manipulations were confounded by additional comments that were occasionally made by the confederates if compliance was not evident after the initial request. For example, in a situation where the participants did not comply with the request to pick up paper bags, they were told by the confederate that he had a "bad back." Thus, the basis for observed compliance may have been the "condition" of the guard rather than the uniform he was wearing.

Use of Blazer Uniforms by Police Departments

In a more applied context, the Menlo Park, California, police department initiated substantial uniform changes that were designed to alter what was perceived to be a negative visual image of the police officer (Tenzel, Storms, & Sweetwood, 1976). In August 1969, the entire department changed from the traditional uniform to one consisting of a standardized olive blazer with an identifying patch worn with dark trousers, a dress shirt, and a tie. Instead of a badge, a name tag was displayed on the left breast pocket of the

blazer, and no rank was exhibited. The gun was inconspicuously worn beneath the blazer and a night stick was not carried. The uniform was also the focal point for a major shift in the department's law enforcement philosophy. Rather than the traditional militaristic "enforcement" model, the "community service" model was established as the underlying orientation of the department. Following the change in uniform, the Menlo Park police were ridiculed by other police officers in the area. The lack of support from law enforcement peers was reported to have led to a greater sense of identity with the citizens of the community. The authors also reported that once the police officers had been stripped of their visual symbols of authority and self-worth represented by the traditional uniform, they were forced to develop new ways of communicating with the community that were not based on power. Other positive results attributed to the change in uniforms included an increase in applicants seeking employment on the police force and a significant drop in employee turnover. More importantly, assaults on police officers decreased by 30% during the first 18 months of the experiment, and the number of injuries to citizens resulting from arrest decreased 50% during the same period. The authors believed that "these figures indicated that ...the new uniform, worn with a new professional attitude, provoked less violence. The end result is clear and leads us to believe that aggression can be dramatically reduced by an alteration of the psychological symbols surrounding the police role" (p. 27).

Approximately five years after the uniform change, a

survey was conducted to identify the attitudes of Menlo Park citizens toward the blazer uniform (Cizanckas & Feist, 1975). The 1974 survey revealed that 66% of the residents of the community were aware of the uniform change and a majority of those individuals favored it. However, blacks were found to be less aware of the new uniform. The researchers reported that the findings "may be due to a stereotyped picture of police officers many members of the black community may hold, making them less likely to notice differences in uniforms among police officers" (p. 209).

In February 1978, the personnel of Menlo Park police department voted almost unanimously to return to the traditional police uniform. The change was not based on problems related to officer safety or ease of identification, but was related to a lack of support for the blazer from officers in neighboring jurisdictions. Menlo Park officers simply could not cope with the role ambiguity and the lack of social support from law enforcement colleagues. Since the "community service" philosophy had become well established within the department, the return to the old uniform did not result in a return to the previously high rate of physically violent arrests. Lieutenant James Enfleen, Deputy Chief of Police, Menlo Park, believes that the uniform does not cause police officers to be more aggressive in their dealings with the public. Rather, it is the values and basic philosophy regarding the police role that exists in a given organization that determines the extent of aggressiveness. If the police in a particular department are generally aggressive in their encounters with the public,

then citizens will perceive the police negatively regardless of the uniform (Enfleen, Note 1).

In 1974, a similar program of uniform change was initiated in Palo Alto, California (Zucher, Garcia, & Curtis, 1976). As part of the study, 18 police officers wore blazer style uniforms for an eight month period. At the end of the pilot program, both citizen and police officer attitudes toward the blazer were examined. Approximately 57% of the citizens surveyed and over 90% of the police officers were not in favor of the blazer uniform with the major reason being ease of officer identification. As a result, the blazer was not adopted for use by field personnel; however, it was made an optional item of apparel for non-patrol personnel.

Other Factors Related to Perception of Police

Although not directly related to the police uniform issue, a study by Brooks and Friedrich (1970) provides insight into the way in which past experience influences an individual's perception of the police. The authors used a semantic differential measure to determine perception of police by college students as influenced by the student's sex, race, age and type of past contact with law enforcement officials. Past contact was defined as being either "direct" or "indirect." Participants in each of the resulting groups were further divided into those that had been arrested and those that had not. The results suggested that the variable which best differentiates an individual's image of the police is race. Brooks and Friedrich (1970) found that blacks generally tended to view the police more negatively than whites. Both types

of contact and arrest record were also significantly related to an individual's perception of the police. Even though there were some differences in attitudes across race, there were no differences between the negative views of the police, as held by both blacks and whites in the "direct contact-arrested category." However, the interpretation of the Brooks and Friedrich study is unclear as their "indirect contact-attested" category appears to be a contradiction in terms.

Race was also found to be a significant factor in a study by Coates (1972) who examined the dimensions of police-citizen interaction. Data were gathered by interview, questionnaire, and field observation of citizen/police interaction in Washington, D. C. Coates determined that the way in which police treatment is perceived is associated with how the police are generally perceived. The quality of one's experience with police seems to be more saliently associated with the police for whites, people over thirty-five, and females. Blacks, persons under thirty-five, and males tend to perceive police as they had previous to an encounter. Coates suggested that race is strongly associated with perception of the police; the young black is typically the most antagonistic toward the police while older whites are the most supportive.

In a similar study, Rusinko, Johnson, and Horning (1978) investigated the relationship between type of past contact and the resulting attitudes of adolescents toward the police. The data were collected by questionnaire administered to 1200 ninth-grade students in three junior high schools in Lansing,

Michigan. The type of contact with police was determined using a self-report measure that assessed the type and frequency of contact that could be expected to contribute to favorable or unfavorable attitudes toward police. Positive contact situations were those in which respondents received some sort of assistance from the police or had the opportunity to observe and appreciate the professional performance of the police. Negative contacts were those situations in which respondents were involved in some way with the police in the exercise of their law enforcement function. Among the findings, the authors reported that positive contact with the police is predictive of positive attitudes toward the police while negative contact is associated with negative attitudes toward the police while negative contact is associated with negative attitudes.

Mann and Renner (1978) examined perception of police using an attitude scale administered to police officers with varying years of experience, to college students, and to Illinois National Guardsmen. Their findings reflect, in part, that being subjected to the noncriminal regulatory function of law enforcement (traffic citations, etc.) does not in itself produce a negative attitude toward police. The most significant variable in negative attitude formation appears to relate to how the citizen perceived his or her treatment by the police, i.e., was the officer verbally and/or physically abusive and arrogant or authoritarian in attitude or was the police officer professional in manner and considerate of the rights of the citizen?

CHAPTER II

STATEMENT OF THE PROBLEM

As pointed out in the introduction to the literature review, the need to create a new image of the police was generated out of the social upheaval of the past decade and was the motivating force behind the movement to discard the traditional police uniform. On the surface, the basis for the change--that the traditional uniform was evaluated negatively by the majority of the citizens--seemed logical considering the hostility that had been directed toward the police. Although many jurisdictions chose to adopt a new "soft look" uniform, no supporting empirical research had been conducted to justify the validity of the rationale for the change.

The evaluation of the effects of new uniform "image" programs has often been restricted in scope or has been methodologically deficient. For example, the results of Ellis' (1973) work on the social meaning of police uniforms revealed that the uniform functions as a method of social control and that it is perceived positively by many individuals. However, Ellis' findings are unclear because his research data was not subjected to statistical analysis.

The purpose of the present study was to assess the reactions of individuals to varying modes of police dress using a methodology that considers both the physiological and

the cognitive components of affective responsivity. The specific hypotheses investigated were:

a. H_{01} : The mode of police dress has no effect on the physiological or cognitive components of affective responsivity of the perceiver.

b. H_{02} : The race of the perceiver is not related to physiological or cognitive components of affective responsivity of the perceiver.

c. H_{03} : There is no interaction between the mode of police dress and race of the perceiver on the physiological or cognitive components of affective responsivity of the perceiver.

responses to the experimental slides. Each adaption slide depicted a fully clothed white male against a blurred background. A semi-opaque slide labeled "Blank" which prevented the glare of the naked projector on the screen separated each adaption and experimental slide. An attempt was made to luminance match all slides as much as possible. A low volume alerting tone of approximately .5 seconds duration was used prior to the presentation of the slides.

Design

A 2 (race of participant) X 3 (style of police dress) between-within design was used. The between factor was race of the observer (i.e., white or black). The within factor was style of police dress (i.e., full uniform, full uniform minus weapon and accessories, and "plain" clothes consisting of blazer, slacks, coat, and tie).

Apparatus

All equipment, including stimulus presentation apparatus, was placed in a room adjacent to where the participants viewed the slides. Stimuli were presented through a one-way mirror and onto a .9 X .9 meter white screen located approximately 1.5 meters from the participant and slightly above eye level. The stimulus presentation apparatus was a Kodak Carousel slide projector modified to advance by means of pulses from a pulse generator and a stepping relay. A cassette tape recorder connected to headphones was used to provide standardized instructions (Appendix A) and alerting tones. The headphones also served to reduce extraneous noise.

Room illumination during the experimental procedure was maintained at the same relatively low level using a 2-watt night light. Room temperature was maintained at $25 \pm 3^{\circ}$ C. The experimental procedures were conducted between 5:00 and 8:00 P.M. each day.

Skin response (SR) was recorded using a Lafayette Skin Resistance Amplifier (Model 76400) and a Lafayette Instrument Datagraph at a paper speed of 10 mm/second. Skin resistance was measured using a constant current of 24 microamperes and Ag/AgCl electrodes (Lafayette 76616) with a contact surface of 3.85 cm^2 . A bipolar method of electrode placement was used on sites located on the palmar medial phalanx of the index and middle fingers of the left hand. Electrodes were attached by means of adhesive collars. Hewlett Packard electrolyte media (Redux Creme, part number 651-1021) was used to insure a stable and uniform contact surface with the participant's skin. Prior to application of electrodes, skin sites were mildly abraded with a silicon pad and then cleaned with acetone.

Heart rate was measured using a Lafayette EEG/EKG Amplifier (Model 76402) connected in the Lead II EKG configuration (left leg and right arm) and a Lafayette Instrument Datagraph at a paper speed of 10 mm/second. Electrode sites were prepared as above except that the sites were not abraded. EKG electrodes (Lafayette 76628) contact surfaces were of nickel silver and measured $2.5 \times 3.5 \text{ cm}$. Electrodes were secured using perforated rubber straps. Presentation of adaptation and experimental slides and alerting tones were

recorded automatically on each participant's record via the event marker on the Lafayette Datagraph.

Procedure

Each participant reported 30 minutes prior to the experiment in order to reduce as much as possible extraneous physiological responses due to physical activity, cigarette smoking, consumption of caffinated beverages, and so on (Prokasy & Raskin, 1973). During the 30 minute pre-experimental period, participants were seated in an adjacent room and were asked to read or study quietly. Brief background data was also obtained on each participant during this period, and an inquiry was made to determine if participants had recently ingested any medication or other substances which would preclude their participation in the experimental procedure. Immediately prior to the experiment, each individual was given the opportunity to use the restroom; participants were requested to wash their hands with soap and hot water before returning. Participants were then escorted to the room in which they would view the slides. After being seated in a comfortable chair, SR and EKG electrodes were attached and the experimenter then left the room. Tape recorded instructions subsequently informed the participant of the general purpose of the experiment and the specific procedures by which the experiment would be conducted. Following the instructions, an interval of approximately 5 minutes was allowed for response stabilization and apparatus calibration.

Participants were then shown three adaption slides,

followed by three experimental slides. (All possible orders of experimental slides were balanced across participants.) The time sequence (see Figure 1) for slide presentation was: an alerting tone; a 30 second prestimulus period; a 30 second stimulus period; a 30 second resting period, and then an alerting tone for the next slide. Slides labeled "Blank" were projected during the prestimulus and resting periods.

Semantic Differential Scale (SDS) Measures

After the electrodes were removed, written instructions for the use of the SDS procedures for evaluating the three stimuli slides were provided. Each slide was presented a second time for 1 minute, and each participant completed the SDS for that slide during the time interval. The SDS consisted of eight bipolar adjectives that rated the concept of police image (Brooks & Friedrich, 1970). A factor analysis conducted by Brooks and Friedrich reflected that the adjective pairs had high loadings (+.8) on the evaluative dimension. Each adjective pair was rated on a seven-point scale; the polarity of the eight pairs was reversed at random in order to counteract response bias tendencies. The SDS instructions and the eight adjective pairs are presented in Appendix B.

Post-Experimental Interview

After a short break, each participant was interviewed in an adjacent room. The purpose of the interview was to debrief participants on the experimental procedure and to solicit their cooperation in not discussing procedural details with others until the end of the semester (see Appendix C).

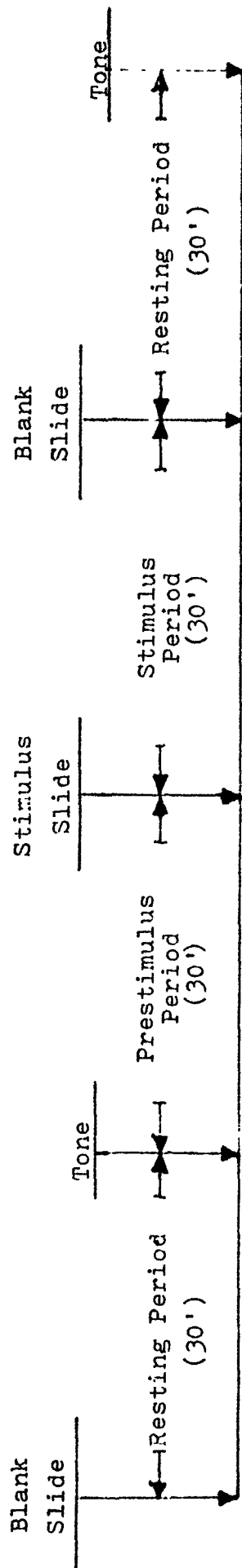


Figure 1. Time Sequence

CHAPTER IV

STATISTICAL PROCEDURES AND RESULTS

Physiological Data Quantification

The physiological responses (i.e., skin response and heart rate) recorded during the 30 second prestimulus and stimulus periods provided the physiological data. The prestimulus period responses values were used as the base period for measuring autonomic changes associated with stimuli. Thus, estimates of physiological activity were obtained over two 30 second periods for each experimental stimulus.

For each individual's skin response record, a baseline was established by first determining the level where no electrodermal activity was present. A line was then drawn through this baseline level for the entire experimental record and the extent of pen deflection was measured in millimeters of deviation from this line.⁴ For each 30 second period, participant skin response data was quantified using the following procedure. Each 30 second period was divided into 10 second intervals and the lowest resistance value was determined for each interval. The data were then converted to conductance units (i.e., micromhos) (Prokasy & Raskin, 1973), and mean conductance values were calculated for both the prestimulus and stimulus periods. Heart rate response was based on the average of the 12 shortest R-R wave intervals for each 30

second period which were converted to beats per minute.

Law of Initial Values

The problem of measuring a physiological response to an experimental stimulus is not straight forward in view of Wilder's (1950) Law of Initial Values (LIV). LIV states that the "true" response of a variable to a stimulus decreases as the prestimulus level increases, i.e., an autonomic change score has a negative correlation with the prestimulus autonomic level. In simplest terms, it means that an autonomic response to a stimulus is a function of the prestimulus autonomic response level and is different from individual to individual, from one physiological variable to another, and from time to time (Sternbach, 1966). The higher the prestimulus level of functioning, the smaller the response to a stimulus. At more extreme prestimulus levels there is a tendency for no response to stimulation and possibly a "paradoxical reaction" where stimulation will produce a negative response, i.e., one that is lower than the prestimulus level. If the magnitude of an autonomic response to a stimulus is dependent upon the prestimulus autonomic level, that is, if LIV holds, then one cannot compare an individual's response to stimulation because they have differing initial autonomic levels.

To determine if LIV is present in physiological data, Johnson and Lubin (1972) and Benjamin (1967) recommend the calculation of Pearson correlations between difference scores (i.e., the difference between the prestimulus and

stimulus values) and prestimulus period response values across all participants by stimulus slide for each physiological measure. If the correlation between the two scores is found to be significant, then LIV is present. Correlation coefficients were calculated using the Statistical Package for Social Science (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). Correlation coefficients were calculated for the three stimuli slides for both skin response and heart rate. Of the six resulting correlations, one significant correlation for skin response and one for heart rate was found ($r(36) = -.394$, $p = .009$, $r(36) = .366$, $p = .014$, respectively).

A variety of procedures have been developed to statistically correct the "contamination" of physiological data by LIV in order to make valid comparisons between individual responses to stimuli. However, only two similar approaches have achieved wide acceptance as the appropriate procedure for use with physiological data (Sternbach, 1966). One is Lacy's (1956) Autonomic Lability Score (ALS), a regression procedure, while the other is the analysis of covariance (Benjamin, 1963 & 1967). Sternbach (1966) succinctly described the utility of the procedure proposed by Benjamin.

The value of the covariance approach is that it combines the analysis of variance and correlation techniques in such a way that responses to stimulation among groups, or among individuals, can be analyzed for significant differences while taking the relation between prestimulus and response levels into account. It is "taken into account" by actually computing the correlation and then removing it (p. 52).

Sternbach suggests that covariance analysis is a more general analysis procedure and recommends that it be used for both the analysis of individual and group physiological

response data. Sternbach, however, cautions that the use of this procedure is based on the critical assumption that the measure of prestimulus and stimulus response levels are linearly related. Even though this linear relationship has held for many studies, Sternbach reports that there have been some exceptions. Consequently, he recommends that all raw physiological prestimulus and stimulus scores be plotted for each stimulus condition to insure linearity of the data and appropriateness of the covariance analysis procedure. Skin response and heart rate data were plotted using the Statistical Package for Social Science (Nie et al., 1975), and the data were found to be linear. Because the data were judged to be linear and because an LIV effect was found to be present, the covariance technique recommended by Benjamin (1963 & 1967) was used to analyze the heart and skin response data.

Results

The factorial analysis of covariance for the heart rate data is summarized in Table 1. There were no differences in heart rate due to the race of the participants, $F(1, 33) = 0.06$, $p > .05$, or the mode of police dress, $F(2, 67) = 1.22$, $p > .05$. Likewise, no interaction between race and mode of dress was evident, $F(2, 67) = 0.56$, $p > .05$.

The summary table for the factorial analysis of covariance for skin response is presented in Table 2. Neither the race of the participant, $F(1, 33) = 0.20$, $p > .05$, nor the mode of police dress, $F(2, 67) = 2.79$, $p > .05$, were found to significantly affect skin response. There was also

no interaction between race and mode of police dress,
 $F(2, 67) = 1.04, p > .05$.

The analysis of variance of the semantic differential data for each stimulus slide is summarized in Table 3. There was no significant effect of race, $F(1, 34) = 3.57, p > .05$, but there was a trend toward blacks viewing police officers more negatively than whites. Mode of police dress, $F(2, 68) = < 1.00, p > .05$, did not affect the response to the semantic differential nor did race and mode of police dress interact to produce an effect, $F(2, 68) = < 1.00, p > .05$.

Table 1
Factorial Analysis of Covariance for Heart Rate

Source	Sum of Squares	df	Mean Squares	F
Race	0.86	1	0.86	0.06
Covariate	18950.82	1	1850.82	280.90
<u>S</u> _s Within Groups	2226.31	33	67.46	
Mode of Police Dress	29.24	2	14.62	1.22
Race X Mode of Police Dress	13.27	2	6.64	0.56
Covariate	203.33	1	203.33	17.02
Residual Error	800.53	67	11.95	

Table 2
Factorial Analysis of Covariance for Skin Response

Source	Sum of Squares	df	Mean Squares	F
Race	0.008	1	0.008	0.20
Covariate	1338.85	1	1338.85	34071.62
<u>S</u> s Within Groups	1.30	33	0.04	
Mode of Police Dress	0.07	2	0.04	2.79
Race X Mode of Police Dress	0.03	2	0.01	1.04
Covariate	0.02	1	0.02	1.57
Residual Error	0.87	67	0.01	

Table 3
Analysis of Variance for the Semantic Differential

Source	df	Sum of Squares	Mean Squares	F
Race	1	6.42	6.42	3.57
<u>Ss</u> Within Groups	34	61.05	1.80	
Mode of Police Dress	2	0.47	0.24	0.13
Race X Mode of Police Dress	2	0.04	0.02	0.01
Residual Error	68	37.53	1.81	

CHAPTER V

DISCUSSION

The findings may be interpreted to indicate that the traditional police uniform is not evaluated more negatively than the "soft look" blazer uniform and that there is no racial difference in the evaluation of various modes of police dress. Furthermore, the presence or absence of a pistol is not a salient factor in this evaluation. It may be concluded that, at least for black and white male college students, the cost of adopting the blazer uniform is not justified on the basis of reducing negative affective reactions toward police.

In the present investigation, the policeman in the blazer-style uniform was identified primarily by a badge which was pinned to the breast pocket of his blazer. Although not examined directly, the results of the available research may be interpreted to indicate that the symbolic authority inherent in a police uniform can be easily generalized to a badge or other symbol as suggested by the literature on the effects of uniforms (Langer, 1965). An essential characteristic of the police uniform--for that matter, any uniform--is that it is distinctive enough to clearly identify its wearer, i.e., it facilitates social placement. With police officers, ease of identification by the citizenry is generally critical. For

example, in recognizing this requirement, the Palo Alto, California, police department rejected a blazer type uniform citing as the reason for their decision the inability of the public to identify it. The Menlo Park, California, police department rejected the blazer uniform, but did not do so because of identifiability problems. However, in Menlo Park the question of ease of identification appears to have been addressed initially in the selection of the color of the blazer.

Since the uniform must be distinctive enough to identify the wearer as a police officer, general principles of learning would predict that an individual's attitudes toward the police as attached to the old uniform would generalize to the new uniform and/or symbol. In a related police uniform study, Cizanchas and Feist (1972) found that blacks living in Menlo Park, California, were less aware than whites of a police uniform change. The authors believed that this difference was due to the blacks' stereotyped image of police officers which made them less likely to notice differences in uniform among police officers. The findings of Cizanchas and Feist would seem to support the idea that there was a generalization of attitudes associated with the stimulus of the police officer in traditional uniform to that presented by the officer in the blazer. Although the external stimulus characteristics of the officers had changed, they were still the police and with that label came stereotypes as would be predicted based on the research on dress and person perception.

The view that it is not the uniform itself but what the

uniform comes to represent because of actions of the wearer was cogently expressed by the Deputy Chief of Police of Manlo Park, California. He pointed out that overly aggressive and hostile police officers will engender a great deal of negative feelings in the public regardless of their uniform (Enfleen, Note 1). The implication is that improvement in the public image of the police cannot be achieved by merely changing the uniform. Rather, such efforts should be directed toward changing the underlying attitudes and beliefs of the police officer toward his or her role in the community and changing the conception of how that role should be carried out. The greatest benefit derived from a change to a blazer uniform may be that it facilitates an examination of this role (Tenzel, Storms, & Sweetwood, 1976).

Generalization of the results of the present investigation should be done with a degree of caution because of the restricted nature of the participant sample. Participants were for the most part from small, generally conservative towns in Kentucky and Tennessee. Rural individuals may have a more positive attitude toward the police because they simply have had less police contact. The participants also were primarily from the middle class families. These two factors may account for the lack of racial differences in the evaluation of police that would be expected, based on the research of Brooks and Friedrich (1970) and Coates (1972).

The most serious limitation of the present study was the inability to control for the effects of the participants' past contacts with police. Due to the Privacy Act of 1974,

verification of personal data using public or institutional records is virtually impossible. An option is to ask potential participants about past involvement with law enforcement. However, the veracity of the resulting self-report data is of unknown validity. The use of unverified data for classifying participants into positive and negative contact groups would perhaps pose a more serious methodological weakness than would its complete exclusion as a factor.

Since the present study was limited to males, it is strongly recommended that future research be directed toward female perception of police; there is some evidence of a sex related difference (Coates, 1972). Age also appears to be a factor which influences the perception of police (Coates, 1972). Therefore, it is recommended that future efforts be devoted toward determining how various age groups differ in their perceptions of police. The methodology used in the present investigation could also be used to examine attitudes of children during a time when the probability of negative contact with police is somewhat remote and during a period of development when attitudes about social control mechanisms, including the police, are being formed.

CHAPTER V

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FOOTNOTES

¹It should be noted that the use of uniforms has frequently been supplemented or superceded by badge or other insignia (Langer, 1965).

²Full police uniform included pistol belt, pistol, nightstick, handcuffs, and other accessories.

³Because of the difficulties inherent in measuring physiological responses for both males and females (Proksay & Raskin, 1973), participants were limited to males.

⁴Prior to each experimental run, the sensitivity of the Lafayette skin resistance amplifier was adjusted as required using an internal 3000 ohm/cm calibration standard.

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Enfleen, J. Personnel communication with the author.
July 10, 1979.

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APPENDIX A

TAPE RECORDED INSTRUCTIONS FOR PARTICIPANTS

Good evening. I appreciate your cooperation in taking part in this research endeavor. In order to insure that each person receives the same instructions, they are being presented by tape recording. We are studying the processes by which people perceive others. In this experiment, I will show you a series of slides on the small screen in front of you. Prior to each slide you will hear a warning tone like this (tone). Thirty seconds after you hear the tone, a slide will be presented. After that slide has been shown for a short period, another slide labeled "blank" will be shown. The tone will then be heard again and the procedure will repeat itself. Because we are measuring your physiological reactions to slides, it is very important that you remain as still as possible during the course of the experiment. It is especially important that you not move your arms, hands, or fingers. Relax, breathe normally, and simply look at the slides as they are presented. We will now have a quiet period to allow you to relax and become adjusted to your surroundings. As soon as your physiological measures stabilize, the experiment will begin. The next sound you will hear will be the warning tone for the first slide. Remember, the warning tone sounds like this (tone). Now just lean back in your chair and relax.

APPENDIX B

Participant Instructions and Semantic Differential ScalesParticipant Instructions

The purpose of this study is to measure the meanings of certain scenes by having individuals like yourself judge them against a series of descriptive scales. Please make sure your judgements are made on the basis of what the scenes mean to you. On each page of this booklet you will find a blank set of scales. You are to rate each scene on the separate scale. You will have about 1 minute for each scene - more than enough time to get done.

Here is how you use the scales:

If you feel that the scene is very closely related to one end of the scale, you should place your check-mark as follows:

FAIR ____:____:____:____:____:____: ☒ UNFAIR

OR

FAIR ☒ ____:____:____:____:____:____: UNFAIR

If you consider the photograph to be neutral on the scale, both sides equally associated with the scene, or if the scale is irrelevant to the scene, then you should place the check-mark in the middle blank as follows:

FAIR ____:____:____: ☒ ____:____:____ UNFAIR

The two blanks between the middle blank and the extreme blank are for marking intermediate degrees of relationship. If you feel that the scene is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

FAIR ____:____:____:____:____:✓:____ UNFAIR

OR

FAIR ____:✓:____:____:____:____:____ UNFAIR

If the scene seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should place your check-mark as follows:

FAIR ____:____:____:____:✓:____:____ UNFAIR

OR

FAIR ____:____:✓:____:____:____:____ UNFAIR

- IMPORTANT: (1) Place your check-mark in the middle of the spaces, and not on the boundaries.
- (2) Be sure you check every scale for every scene-do not omit any.
- (3) Never put more than one check-mark on a single scale.

Sometimes you may feel that you have had the same scene before. This will not be the case; do not look back and forth through the booklet. In fact, try to give as "context-free" evaluation to each scene as you can. That is, try not to let the scenes that you will see first affect your judgments on the later scenes.

Do not try to remember how you checked similar scales earlier on a given page. Make each scale a separate and independent judgement. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the scenes, that are important. On the other hand, please do not be careless because we want your true impressions.

Semantic Differential Scales

intelligent	___:___:___:___:___:___:___	stupid
honest	___:___:___:___:___:___:___	dishonest
stable	___:___:___:___:___:___:___	unstable
uninformed	___:___:___:___:___:___:___	informed
fair	___:___:___:___:___:___:___	unfair
untrustworthy	___:___:___:___:___:___:___	trustworthy
immoral	___:___:___:___:___:___:___	moral
competent	___:___:___:___:___:___:___	incompetent

APPENDIX C

DEBRIEFING OF SUBJECTS

Participants were debriefed immediately upon completion of the experiment. Each participant was asked if he had been able to determine the experimental hypotheses, and if he had had any prior knowledge about the experiment. The purpose of the experiment, including the experimental hypotheses, was then explained, followed by a detailed explanation of the procedure and the equipment used for data recording. At the conclusion of the debriefing, participants were asked not to discuss the experiment with others until after the end of the semester.